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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/657,580

09/08/2003

Andrew Krutchinsky

1119-2 CON

9872

7590

02/23/2004

Irving N. Feit
HOFFMANN & BARON, LLP
6900 Jericho Turnpike
Syosset, NY 11791

EXAMINER

GURZO, PAUL M

ART UNIT

PAPER NUMBER

2881

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/657,580

Applicant(s)

KRUTCHINSKY ET AL.

Examiner

Paul Gurzo

Art Unit

2881

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 67-92 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 67-92 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>0104</u> . | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 67-92 rejected under 35 U.S.C. 103(a) as being unpatentable over Krutchinsky et al. (WO99/38185).

Regarding claims 67 and 80, 185 teaches a method of transmitting ions along an axis located between a length defined by a first mass spectroscopy device (1) and a second mass spectroscopy device (5) said method comprising the steps of receiving the ions from the first mass spectroscopy device (1), guiding the ions along the axis, accelerating the ions (page 8, lines 1-5), damping the ions (page 5, lines 1-16 and Fig. 1), and delivering a substantially continuous beam (page 4, lines 16-20) of ions to the second mass spectroscopy device. They do not explicitly teach that the damping and accelerating is done along the entire length of the ion guide (3), but they teach that at least a portion of the ion path is damped with a damping gas and accelerated downstream, thus it is obvious that if the damping and accelerating is done over select portions of the path, all portions can be combined to achieve damping and accelerating over the entire portion. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to damp and accelerate over the entire length because this will achieve a reduction in the overall energy spread of the emitted ions, suppression of

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unwanted fragmentation, and efficient transportation into the second mass spectroscopy device (5).

Regarding claims 68-71 and 81-84, 185 teaches a multipole ion guide within a pressurized gas environment (page 6, lines 12-17 and page 11, lines 1-4). They also teach a gas pressure in the range of about 10^{-4} Torr to 760 Torr, which teaches on the claimed range.

Regarding claims 72 and 85, 185 teaches the use of a pump to maintain the pressure (page 11, lines 21-24).

Regarding claims 73-79 and 86-92, 185 teaches the use of a quadrupole, hexapole, or octopole rod set (page 11, lines 1-4). Fig. 1 clearly depicts the claimed symmetric arrangement and it is an obvious design choice to arrange the rods closer to the axis at the first device than the second device and the specification lacks teaching as to how this arrangement will produce any new or unexpected increase in damping, accelerating, or transporting.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Franzen (5,708,268)

Whitehouse et al. (6,011,259)

Wang et al. (6,627,883)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Gurzo whose telephone number is (571) 272-2472. The examiner can normally be reached on M-Fri. 7:30 - 6:00.

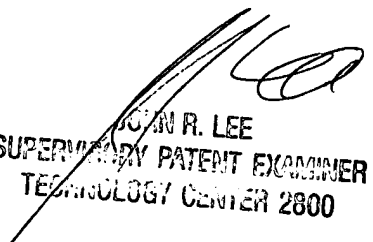
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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Lee can be reached at (571) 272-2477. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

PMG

January 30, 2004


JOHN R. LEE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800